

## **High Transmittance Sub-Wavelength Structure Polarization Module**

### **ABSTRACT**

5        The present invention relates to a high-transmission polarization module  
composed of sub-wavelength structures, which comprises: a transmission  
substrate and a plurality of collimation units. The transmission substrate  
possesses a top and a bottom surfaces. The top surface has a plurality of  
projecting and sunken parts, wherein the sunken part has a first sub-  
10 wavelength structure while the projecting part has a second sub-wavelength  
structure. The collimation units are arranged on the bottom surface  
according to the positions of the sunken parts capable of guiding the light  
into the sunken part. The first sub-wavelength structure is capable of  
separating the light with different polarizations while the second sub-  
15 wavelength structure is capable of shifting the phase of the light so that the  
light can pass the polarization module with a high efficiency and producing  
a light with a specific polarization.